

# Work Order ID 98279

\*98279\*

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Item ID: D2013-3 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Mirror Bracket LH, 212  
 Start Date: 3/12/13 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 3/18/13 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: MCS Date: 13-03-15 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_  
 Run Start **\*NR1\***  
 Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
| D2013    | Rev C        |

|              |   |      |  |  |  |  |  |  |  |
|--------------|---|------|--|--|--|--|--|--|--|
| 100          | NC BRAKE  | 0.00 |  |  |  |  |  |  |  |
| <b>*100*</b> |   |      |  |  |  |  |  |  |  |
| Brake NC     | Memo  | 0.00 |  |  |  |  |  |  |  |
| Brake NC     | 1-Punch as per template D2013-T3 and Dwg D2013<br>2-Flatten ends of D2013-3 tube as per Dwg D2013 using DT8545<br>3-Bend (1) tube as per Dwg D2013 using Jig DT8201<br>Identify as D2013-3.<br>4-Deburr as required |      |  |  |  |  |  |  |  |

|                 |   |      |  |  |  |  |  |  |  |
|-----------------|---|------|--|--|--|--|--|--|--|
| 110             | QC5- Inspect part completeness to step on W/O | 0.00 |  |  |  |  |  |  |  |
| <b>*110*</b>    |   |      |  |  |  |  |  |  |  |
| QC              | Memo  | 0.00 |  |  |  |  |  |  |  |
| Quality Control |   |      |  |  |  |  |  |  |  |

SB  
13/05/06

FF  
13-05-24

13 S 24

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |             |             |   |  |                          |   |                        |                     |  |  |   |  |
|--|-------------|-------------|---|--|--------------------------|---|------------------------|---------------------|--|--|---|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____   |             |             |   | <b>DISPOSITION</b><br><br><div style="display: flex; justify-content: space-around;"> <div>             Rework <input type="checkbox"/><br/>             Scrap <input type="checkbox"/><br/>             Use-as-is <input type="checkbox"/><br/>             Work Order Update <input type="checkbox"/> </div> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Crosstube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                          | <b>AGAINST DEPARTMENT/PROCESS</b>   |                        |                     |  |  |   |  |
| <b>Root Cause</b>  | <b>Date</b> | <b>Step</b> | <b>Qty</b>  | <b>Description of work order update or Non-conformance</b>   | <b>Initial Chief Eng</b> | <b>Action Description</b>   | <b>Sign &amp; Date</b> | <b>Verification</b> | <b>QC Inspector</b>  |  |   |  |
| <div style="display: flex;"> <div style="width: 50px; font-size: 0.8em;">             Doc/Data<br/>Equip/Tooling<br/>Operator<br/>Material<br/>Setup<br/>Other<br/>Process<br/>Supplier<br/>Training<br/>Unapproved           </div> <div style="width: 10px; border-left: 1px solid black;"></div> </div>   |             |             |   |  |                          |   |                        |                     |  |  |   |  |
| <b>FAULT CATEGORY</b>  |             |             |   |  |                          |   |                        |                     |  |  |   |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |             |             | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |  |                          | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |                        |                     | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |  |

# Work Order ID 98279

\*98279\*

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Item ID: D2013-3 Accept \*N900040100\* Setup Start \*NS1\*  
Revision ID: Stop \*NS2\*  
Item Name: Mirror Bracket LH, 212  
Start Date: 3/12/13 Start Qty: 4.00 \*4\* Cust Item ID:  
Required Date: 3/18/13 Req'd Qty: 4.00 \*4\* Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description                             | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 120                            | Identify as per dwg & Stock Location: <u>W/A 001</u> | 0.00                 |         |        |              |               |               |                  |                |
| *120*                          |  |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo   | 0.00                 |         |        |              |               |               |                  |                |
| Packaging                      |  |                      |         |        |              |               |               |                  |                |
| 130                            | QC21- Final Inspection - Work Order Release          | 0.00                 |         |        |              |               |               |                  |                |
| *130*                          |  |                      |         |        |              |               |               |                  |                |
| QC                             | Memo   | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |  |                      |         |        |              |               |               |                  |                |

13/5/27  
13-5-27

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |  |
|--|---|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br><div style="display: flex; justify-content: space-around;"> <div>Rework <input type="checkbox"/></div> <div>Skid-tube <input type="checkbox"/></div> <div>Crosstube <input type="checkbox"/></div> <div>Water Jet <input type="checkbox"/></div> <div>Engineering <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Scrap <input type="checkbox"/></div> <div>Machining <input type="checkbox"/></div> <div>Small Fab <input type="checkbox"/></div> <div>Prod. Eng. Coord. <input type="checkbox"/></div> <div>Quality <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Use-as-is <input type="checkbox"/></div> <div>Thermoforming <input type="checkbox"/></div> <div>Finishing <input type="checkbox"/></div> <div>Rec/Store/Packaging <input type="checkbox"/></div> <div>Other <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Work Order Update <input type="checkbox"/></div> <div>Large Fab <input type="checkbox"/></div> <div>Composite <input type="checkbox"/></div> <div>Supplier <input type="checkbox"/></div> </div> |  |
|--|---|--|

| Root Cause    | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Setup         |      |      |     |   |                   |                    |             |              |              |
| Other         |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |

### FAULT CATEGORY

|   |   |   |   |
|---|---|---|---|
| <b>Landing Gear</b><br><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |
|---|---|---|---|

# Picklist Print

March-12-13 1:45:33 PM

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T

Work Order ID: 98279

Parent Item: D2013-3

Parent Item Name: Mirror Bracket LH, 212

Start Date: 3/12/13

Required Date: 3/18/13

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 05-11-01 JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

M304TR0.750W.049  
304 RD Tube .750 x .049W

Purchased No

100 f 398.1754 1.9473 8.199158

8.5 13/05/06

| Location | Loc Qty     | Loc Code |
|----------|-------------|----------|
| MAT017   | 398.1754325 |          |
| 122312   | 26.37       |          |
| 122468   | 0.0000325   |          |
| 124768   | 371.8054    |          |

8.5

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

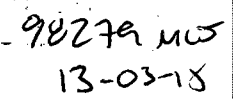
|  |   |   |
|--|---|---|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |
|--|---|---|

| Root Cause    | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Setup         |      |      |     |   |                   |                    |             |              |              |
| Other         |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |

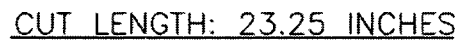
**FAULT CATEGORY**

| Landing Gear  | General                                 | Other  |
|---|---|--|
| <input type="checkbox"/> Bending                      | <input type="checkbox"/> Bend           | <input type="checkbox"/> Grain                           |
| <input type="checkbox"/> Centre Not Concentric to O/S | <input type="checkbox"/> BOM/Route      | <input type="checkbox"/> Hardware                        |
| <input type="checkbox"/> Cracks                       | <input type="checkbox"/> Broken/Damaged | <input type="checkbox"/> Inspection Incomplete           |
| <input type="checkbox"/> Crushed/Crimped              | <input type="checkbox"/> Burrs          | <input type="checkbox"/> Instructions Incomplete/Unclear |
| <input type="checkbox"/> Cuffs                        | <input type="checkbox"/> Contamination  | <input type="checkbox"/> Maintenance                     |
| <input type="checkbox"/> Heat Treat                   | <input type="checkbox"/> Countersink    | <input type="checkbox"/> Mislabeled                      |
| <input type="checkbox"/> Inspection Strip in Tube     | <input type="checkbox"/> Cut Too Short  | <input type="checkbox"/> Misread                         |
| <input type="checkbox"/> Ripples in Bend              | <input type="checkbox"/> Drill Holes    | <input type="checkbox"/> Offset                          |
| <input type="checkbox"/> Torque Waves in Extrusion    | <input type="checkbox"/> Drawing        | <input type="checkbox"/> Out of Calibration              |
| <input type="checkbox"/> Turning Sequence             | <input type="checkbox"/> Finish         | <input type="checkbox"/> Out of Sequence                 |
| <input type="checkbox"/> Wave/Twist in Tube           | <input type="checkbox"/> Folio          | <input type="checkbox"/> Outside Dimensions              |
|   |   | <input type="checkbox"/> Ovalized                        |
|   |   | <input type="checkbox"/> Over/Under tolerance            |
|   |   | <input type="checkbox"/> Part Incorrect                  |
|   |   | <input type="checkbox"/> Part Lost/Missing               |
|   |   | <input type="checkbox"/> Part Moved                      |
|   |   | <input type="checkbox"/> Positioned Wrong                |
|   |   | <input type="checkbox"/> Power Loss/Surge                |
|   |   | <input type="checkbox"/> Pressure/Forced                 |
|   |   | <input type="checkbox"/> Temperature/Cure                |
|   |   | <input type="checkbox"/> Weld                            |
|   |   | <input type="checkbox"/> Wrong Stock Pulled              |
|   |   | <input type="checkbox"/> Other                           |

KE 99.06.10



DRILL Ø0.257 (TYP) —  
0.400 (TYP)



**DART**



|          |          |  |                               |                             |  |
|----------|----------|--|-------------------------------|-----------------------------|--|
| DESIGN   | DRAWN BY |  |                               | DART AEROSPACE LTD          |  |
| JB       | RF       |  |                               | HAMKESBURY, ONTARIO, CANADA |  |
| CHECKED  | APPROVED |  | DRAWING NO.                   | REV. C                      |  |
| KE       | JD       |  | D2013                         | SHEET 1 OF 3                |  |
| DATE     |          |  | TITLE                         | SCALE                       |  |
| 99.06.07 |          |  | MIRROR BRACKET                | NTS                         |  |
| A        | 90.10.22 |  | NEW ISSUE                     |                             |  |
| B        | 94.06.15 |  | REDRAWN                       |                             |  |
| C        | 99.06.07 |  | REDRAWN, CHANGE OF DIMENSIONS |                             |  |

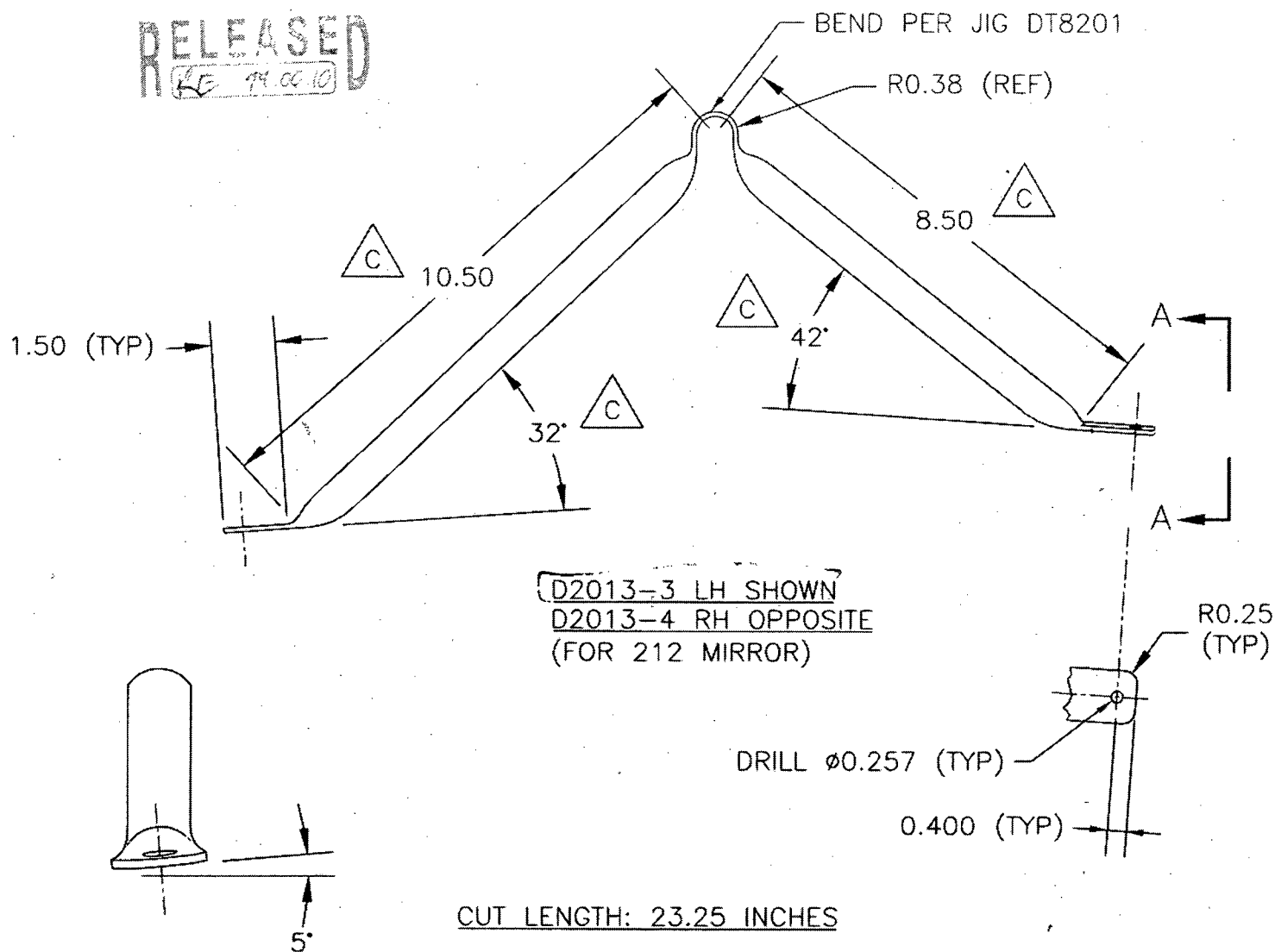




RELEASED  
KE 74.06.10

9827R

**DART**



CUT LENGTH: 23.25 INCHES

MATERIAL: AISI 304/316 SS SEAMLESS TUBE,  
0.750 O.D. x 0.049 WALL

|         |          |          |                |   |
|---------|----------|----------|----------------|---|
| DESIGN  | JB       | DRAWN BY | RF             | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |
| CHECKED | KE       | APPROVED | [Signature]    | DRAWING NO. D2013                                 |
| DATE    | 99.06.07 | TITLE    | MIRROR BRACKET | REV. C<br>SHEET 2 OF 3                            |
|         |          | SCALE    | NTS            |   |

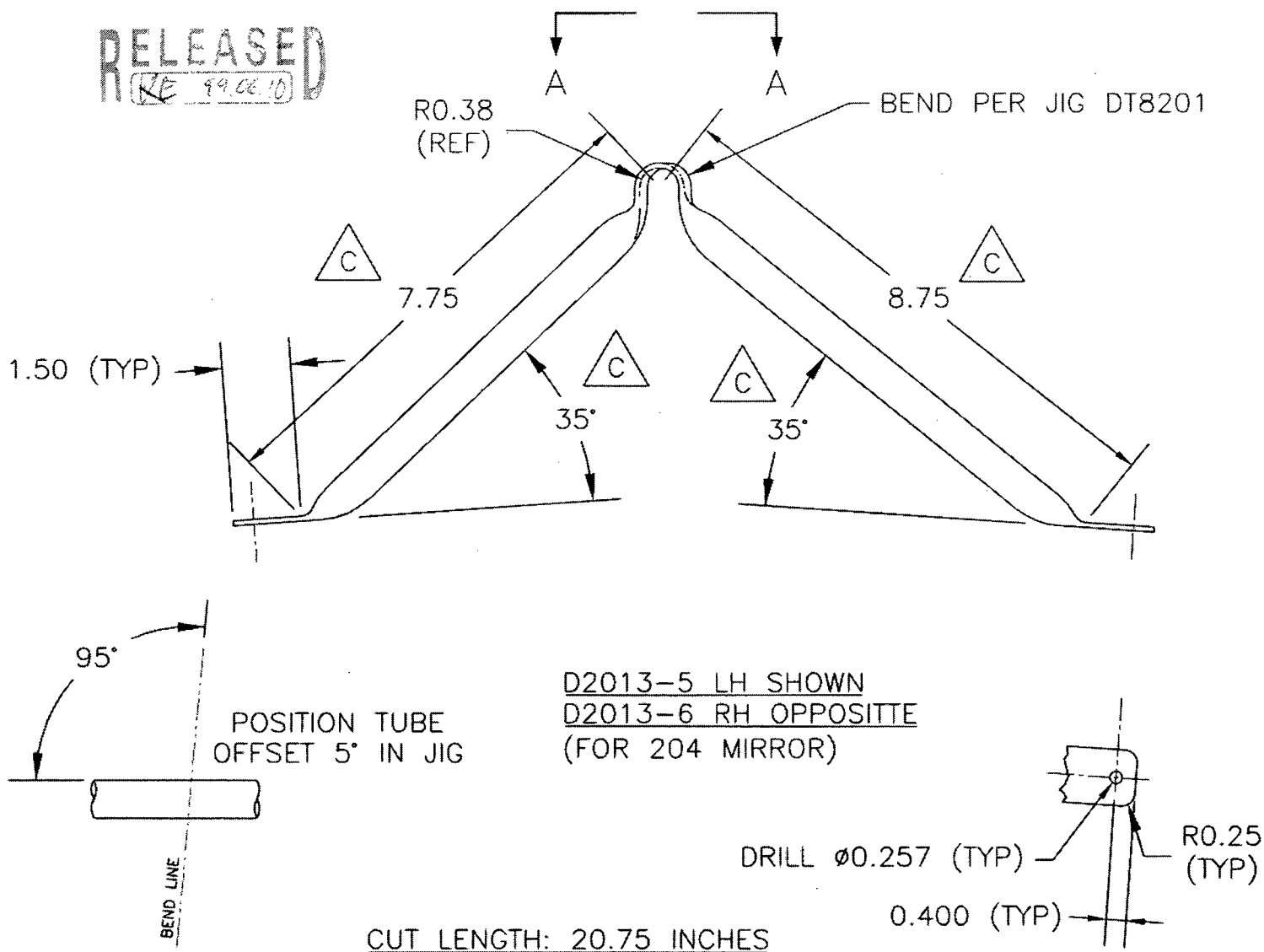
98279

RELEASED  
(KE 99.06.10)

**DART**

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| DESIGN  | JB       | DRAWN BY | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |
|---------|----------|----------|---|
| CHECKED | KE       | APPROVED | DRAWING NO. D2013                                 |
| DATE    | 99.06.07 | TITLE    | MIRROR BRACKET                                    |
| SCALE   | NTS      | REV. C   | SHEET 3 OF 3                                      |